What is claimed is:

1. An ultrasonic motor comprising:

a stator that includes:

at least one piezoelectric element;

a flexible aluminum-based connective arrangement that includes a plurality of aluminum-based electrodes, which apply a voltage to the at least one piezoelectric element to generate a vibration from the at least one piezoelectric element, wherein each aluminum-based electrode is made of one of aluminum and an aluminum alloy and directly contacts a corresponding one of axial ends of the at least one piezoelectric element; and

a plurality of aluminum-based metal blocks, each of which is made of one of aluminum and an aluminum alloy, wherein the at least one piezoelectric element and the aluminum-based electrodes are interposed between corresponding two of the aluminum-based metal blocks; and

a rotor that is slidably and rotatably urged against the stator, wherein the rotor is rotated upon generation of the vibration in the stator.

2. The ultrasonic motor according to claim 1, wherein the flexible aluminum-based connective arrangement is a single flexible aluminum-based connective arrangement present in the stator.

3. The ultrasonic motor according to claim 1, wherein the

flexible aluminum-based connective arrangement is integrally formed and further includes:

a plurality of disks, each of which has at least one of the aluminum-based electrodes; and

a plurality of connecting portions, each of which connects between corresponding two of the disks.

4. The ultrasonic motor according to claim 3, further comprising a connector that is connected to an external power source, wherein the flexible aluminum-based connective arrangement further includes an extension that is electrically connected to the connector at one end of the extension and is electrically connected to one of the disks and the connecting portions at the other end of the extension.

5. The ultrasonic motor according to claim 1, wherein:

the plurality of aluminum-based electrodes includes a first group of aluminum-based electrodes and a second group of aluminum-based electrodes;

the flexible aluminum-based connective arrangement further includes a first conductive line and a second conductive line;

the first conductive line is electrically connected to the aluminum-based electrodes of the first group; and

the second conductive line is electrically connected to the aluminum-based electrodes of the second group.

6. The ultrasonic motor according to claim 5, wherein:

the flexible aluminum-based connective arrangement further includes a dielectric substrate; and

the first group of aluminum-based electrodes, the second group of aluminum-based electrodes, the first conductive line and the second conductive line are formed on the dielectric substrate.

7. The ultrasonic motor according to claim 6, wherein the at least one piezoelectric element includes first and second piezoelectric elements.

8. The ultrasonic motor according to claim 7, wherein:

the corresponding two of the aluminum-based metal blocks are first and second aluminum-based metal blocks, respectively;

the first group of aluminum-based electrodes includes first and second aluminum-based electrodes;

the second group of aluminum-based electrodes includes third and fourth aluminum-based electrodes;

a first axial end of the first piezoelectric element, which is adjacent to the first aluminum-based metal block, directly contacts the fourth aluminum-based electrode;

a second axial end of the first piezoelectric element, which is opposite from the first axial end of the first piezoelectric element, directly contacts the first aluminum-based electrode;

a first axial end of the second piezoelectric element,

which is adjacent to the second axial end of the first piezoelectric element, directly contacts the second aluminum-based electrode; and

a second axial end of the second piezoelectric element, which is opposite from the first axial end of the second piezoelectric element and is adjacent to the second aluminum-based metal block, directly contacts the third aluminum-based electrode.

9. The ultrasonic motor according to claim 8, wherein:

the first aluminum-based electrode is electrically insulated from the second aluminum-based electrode by the dielectric substrate;

the third aluminum-based electrode is electrically insulated from the second aluminum-based metal block by the dielectric substrate; and

the fourth aluminum-based electrode is electrically insulated from the first aluminum-based metal block by the dielectric substrate.

10. The ultrasonic motor according to claim 1, wherein the rotor is made of one of aluminum and an aluminum alloy.

11. A method for manufacturing an ultrasonic motor, the method comprising:

forming a flexible aluminum-based connective arrangement that is planar and includes a plurality of aluminum-based

electrodes, each of which is made of one of aluminum and an aluminum alloy;

constructing a stator by assembling the flexible aluminum-based connective arrangement, at least one piezoelectric element and a plurality of aluminum-based metal blocks made of one of aluminum and an aluminum alloy, so that the flexible aluminum-based connective arrangement is bent, and each aluminum-based electrode directly contacts a corresponding one of axial ends of the at least one piezoelectric element; and

installing a rotor to the stator in such a manner that the rotor is slidably and rotatably urged against the stator.

12. The method according to claim 11, wherein:

the forming of the flexible aluminum-based connective arrangement includes:

forming a plurality of disks, each of which has at least one of the aluminum-based electrodes; and

forming a plurality of connecting portions, each of which connects between corresponding two of the disks; and

the assembling of the flexible aluminum-based connective arrangement includes bending of each of the connecting portions.

13. The method according to claim 11, wherein the forming of the flexible aluminum-based connective arrangement includes positioning the plurality of aluminum-based electrodes in such a manner that centers of the aluminum-based electrodes are aligned along an imaginary straight line.

14. The method according to claim 13, wherein the plurality of aluminum-based electrodes includes four aluminum-based electrodes.